

Title of Material: _____

Publisher: _____

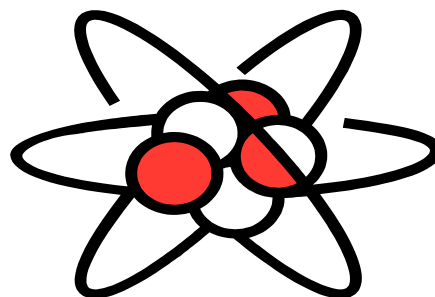
Reviewer: _____

Percentage of Standards: _____

Grade Four--possible 44 (content knowledge & skills)
(Number of Yes checks divided by 44 = percentage)

Idaho Achievement Standards

Science for **Grade Four**



587 SCIENCE STANDARDS – GRADE 4, SECTIONS 588 THROUGH 598.

The samples associated with the content standards are meant to illustrate meaning and to represent possible areas of applications. They are not intended to be an exhaustive list, but are samples of applications that would demonstrate learning.

588 UNIFYING CONCEPTS OF SCIENCE.

Standard – The student will:	Content Knowledge and Skills:	YES	NO
01. Understand systems, order, and organization	a. Recognize that a system is an organized group of related objects that form a whole.	Indicate Page No	
	b. Explore the solar system.	Indicate Page No	
02. Understand concepts and processes of evidence, models, and explanation.	a. Develop skills in observation and data collection.	Indicate Page No	
	b. Recognize the difference between observations and inferences.	Indicate Page No	
	c. Develop and/or use models to explain how things work.	Indicate Page No	
03. Understand constancy, change, and measurement.	a. Explore concepts in science that do not change with time.	Indicate Page No	
	b. Understand that changes occur and can be measured.	Indicate Page No	
	c. Measure using standard and metric systems.	Indicate Page No	
04. Understand the theory that evolution is a process that relates to the gradual changes in the universe and of equilibrium as a physical state.	a. Understand the relationships of past, present, and future.	Indicate Page No	
05. Understand concepts of form and function.	a. Discover the relationship between shape and use.	Indicate Page No	

589 CONCEPTS OF SCIENTIFIC INQUIRY.

Standard – The student will:	Content Knowledge and Skills:	YES	NO
01. Understand scientific inquiry and develop critical thinking skills.	a. Identify questions that can be answered by conducting scientific tests.	Indicate Page No	
	b. Conduct scientific tests.	Indicate Page No	
	c. Use appropriate tools and techniques to gather and display data.	Indicate Page No	
	d. Use data to construct a reasonable explanation.	Indicate Page No	
	e. Make simple predictions based on data.	Indicate Page No	
	f. Explore alternative explanations.	Indicate Page No	
	g. Communicate the results of tests to others.	Indicate Page No	

590 CONCEPTS OF PHYSICAL SCIENCE

Standards - The student will:	Content Knowledge and Skills:	YES	NO
01. Understand the structure and function of matter and molecules and their interactions.	a. Use simple instruments to measure properties.	Indicate Page No	
	b. Explore the properties of solids, liquids, and gases.	Indicate Page No	
	c. Know that heating and cooling can cause changes of state in common materials.	Indicate Page No	

02. Understand concepts of motion and forces.	a. Investigate the effect of pull/push on the motion and direction of objects.	Indicate Page No	
	b. Research different forms of energy.	Indicate Page No	
	c. Explore and investigate the six simple machines: demonstrate that the six simple machines can decrease the amount of force necessary to complete a task.	Indicate Page No	
03. Understand the total energy in the universe is constant.	a. Compare and contrast potential and kinetic energy.	Indicate Page No	

591. CELLULAR AND MOLECULAR CONCEPTS.

Cellular and Molecular concepts standards do not apply at this grade level.

592. INTERDEPENDENCE OF ORGANIZMS AND BIOLOGICAL CHANGE.

Standard – The student will:	Content Knowledge and Skills:	YES	NO
01. Understand the theory of biological evolution.	a. Investigate diversity of plants and animals and how they adapt in order to survive in their environment.	Indicate Page No	
	b. Investigate how plants and animals become extinct if their adaptations do not fit their environment.	Indicate Page No	
	c. Recognize the difference between vertebrate and invertebrate animals: classify vertebrate animals (mammals, reptiles, birds, fish, amphibians).	Indicate Page No	

593. MATTER, ENERGY, AND ORGANIZATION IN LIVING SYSTEMS.

Standard – The student will:	Content Knowledge and Skills:	YES	NO
01. Understand the relationship between matter, energy, and organization to trace matter as it cycles and energy as it flows through living systems and between living systems and the environment.	a. Know that living systems require energy to survive.	Indicate Page No	
	b. Understand the food chain and know that organisms both cooperate and compete in ecosystems.	Indicate Page No	

594. EARTH AND SPACE SYSTEMS.

Standard – The student will:	Content Knowledge and Skills:	YES	NO
01. Understand scientific theories of origin and subsequent changes in the universe and earth systems.	a. Explore the length of a day, the seasons, the year, phases of the moon, and eclipses.	Indicate Page No	
	b. Compare and contrast the contents of the solar system.	Indicate Page No	
	c. Explore the effect of gravity on the solar system; include elements within the solar system such as the Earth, Moon and tides.	Indicate Page No	

595. TECHNOLOGY.

Standard – The student will:	Content Knowledge and Skills:	YES	NO
01. Understand the relationship between science and technology and develop the abilities of technological design and application.	a. Know that technology is the means by which people use knowledge, tools, and systems to make their lives easier and better.	Indicate Page No	
	b. Recognize that people have invented tools for everyday life and for scientific investigations.	Indicate Page No	
	c. Create a tool to perform a specific function.	Indicate Page No	
	d. Use available and appropriate technology.	Indicate Page No.	

596. PERSONAL AND SOCIAL PERSPECTIVES.

Standard – The student will:	Content Knowledge and Skills:	YES	NO
01. Understand common environmental quality issues, both natural and human induced.	a. Identify issues in the local environment.	Indicate Page No	
02. Understand the causes and effects of population change.	a. Understand the effect of technological development and human population growth on local towns and/or Idaho.	Indicate Page No	

03. Understand the importance of natural resources and the need to manage and conserve them.	a. Understand the concept of recycling.	Indicate Page No	
	b. Understand the conservation of natural resources.	Indicate Page No	
04. Understand different uses of technology in science and how they affect our standard of living.	a. Identify examples of technologies used in scientific fields.	Indicate Page No	

597. HISTORY OF SCIENCE

Standard – The student will:	Content Knowledge and Skills:	YES	NO
01. Understand the significance of major scientific milestones.	a. Understand major contributions of various scientist and researchers.	Indicate Page No	

598. INTERDISCIPLINARY CONCEPTS.

Standard – The student will:	Content Knowledge and Skills:	YES	NO
01. Understand that interpersonal relationships are important in scientific endeavors.	a. Work in teams to solve problems.	Indicate Page No	
02. Understand technical communication.	a. Read and understand instructions.	Indicate Page No	